

# **CONTINGENCY MANUAL FOR CLASSICAL SWINE FEVER**

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Livestock and Agricultural Service  
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DOCUMENT FOR DISCUSSION

## CONTINGENCY MANUAL FOR CLASSICAL SWINE FEVER

### I. CHARACTERISTICS OF CLASSICAL SWINE FEVER

#### 1.- IDENTIFICATION

CSF is a serious pig disease causing huge economic losses. It can spread as an epidemiologic infection, and it can also become established on an enzootic basis on the populations of both domestic and wild pigs.

The first report of this disease, corresponding to what is now known as CSF for Swine cholera, dates back to 1833, in Ohio, USA.

An epizootia similar to CSF was reported in France in 1822, which would lead us to think that the disease may have been introduced into America through swine from Europe

CSF can develop with a great variety of clinical and anatomopathological manifestations, depending on the virulence of the strain, the immune condition of the animal and of its age.

The characteristic lesions described for this disease are present in general for highly virulent strains in animals, which have not been immunized, and more easily in suckling pigs than in adult animals.

There may be asymptomatic carrier animals, which is most important in the shedding of the virus and therefore, in the CSF epizootiology.

In general, two forms of the disease have been described in adult swine: acute and chronic.

Furthermore, there is a transplacental form of CSF, which can give origin to various fetal and neonatal affections and to asymptomatic persistent infections.

The acute clinical form is characterized, in susceptible pigs by:

- Fever (41.0 C- 105.0 F or more), anorexia, lethargy.
- Multifocal hyperemia and hemorrhagic lesions in the skin, conjunctivitis.
- Skin cyanosis, specially in protruding parts (ears, limbs, tail, snout).
- Transitory constipation followed by diarrhea
- Occasional vomits,
- Dysnea, coughs
- Neurological symptoms, such as ataxia, paresis, and convulsions
- Pigs tend to crowd together,
- There may be abortions and still births
- Death occurs 5-15 days after breakout of the disease
- Death rate in young pigs can be close to 100%, high morbidity and death of animals of between 10 and 20 days of age.

The lesions of this form are:

- Leucopenia and thrombocytopenia
- Widely spread petechias, and echymosis, especially in the skin, lymph nodes, larynx, bladder, renal cortex, the ileocecal valve.
- Multifocal infarct of the spleen is characteristic, but not always present.
- Lymph nodes are increased in size and haemorrhagic.
- Encephalomyelitis with perivascular sleeve.



This form of CSF is frequently complicated due to bacterial invasions secondary to *Pasteurella multocida* and *Salmonella choleraesuis*.

If *Pasteurella* invades the lungs, there will be bronchopneumonia, and in the case of *Salmonella*, there could be serious enteritis.

The chronic form is characterized by the fact that animals will survive over 30 days after infection, and there may be some carrier animals.

It is characterized by intermittent fever periods with viremia, stunting, or poor conversion indices, cough and intermittent diarrhea.

Apparent recovery can be observed, with subsequent relapse and death.

The lesions found do not present a clear evidence of hemorrhagic forms, although some organs may be affected, such as nodes, there appear ulcers in the shape of a bottom in the secum and in the large gut, and a generalized atrophy of the lymphoid tissue can be observed.

The persistent congenital and transplacental form is a most important form of this disease, especially vis a vis its eradication.

Much other pestivirus, the CSF virus moves easily through the placenta, and can produce transplacental lesions, without other kind of signals appearing either in the animal or in the farm. These forms are characteristic of infections by low virulence strains in gestating animal, or by high or moderate virulence strains in vaccinated gestants.

The effects of the CSF virus on the fetus will vary according to the time of gestation in which infection took place, the strain virulence, and the immune status.

In general what can be observed is:

- Death of embryo or fetus,
- Fetal malformations
- Still-born animals
- Persistent congenital infections.

Persistent congenital infection is one of the most serious, since it not only represents a huge economic disturbance but a sanitary one, as there appear animals which shed their virus on a permanent basis as well as stunted sucking pigs, which will also shed the virus.

Sucking pigs seem to be healthy, but they are viremic, and towards nine weeks of age they begin to show conjunctivitis, anorexia, stunting, intermittent diarrhea problems, as well as related ones.

As the most characteristic signal in necropsy, a marked atrophy of the thymus can be observed.

This form is most serious for control and eradication programs for these diseases.

#### Differential Diagnosis

As a differential diagnosis the following swine diseases should be considered: African Swine Fever, infection caused by the virus of Bovine Viral Diarrhea, Eripela, Salmonellosis, Acute Pasteurellosis, other viral Encephalomyelitis, intoxication due to cumarine and micotoxicosis, and thrombocitopenic Purpura in sucking pigs

## Laboratory Diagnosis

Concerning the laboratory diagnosis of CSF, alternatives for virus or viral antigen detection, antibody detection and viral nucleic acid detection should be taken into account.

"A good laboratory diagnosis requires a good sample"

### VIRUS OR VIRAL ANTIGEN DETECTION

The most frequently used methods are "viral isolation", "direct immunofluorescence" and "capture ELISA".

The samples to be sent are: tonsils, lymph nodes (pharyngeal, mesenteric), spleen, kidney, distal ileum and blood with EDTA in live animals.

#### Viral Isolation

The CSF virus isolation in cell cultivation is considered at present as the required or mandatory technique in areas which are free of the disease, or else, as a confirming technique in case of doubt.

It is based in the capacity of the virus to multiply in the swine cell line known as PK 15.

It is a highly sensitive technique since no matter how little virus may be present in the sample, this virus will multiply in the line, and it is also highly specific, thanks to monoclonal antibodies.

The only problem it presents is that it is time consuming and laborious, and it can take between 3 to 5 days.

#### Direct Immunofluorescence in Tissues

This technique consists in evidencing viral antigens in histological microtome slices of suspect organs, through dyeing of the polyclonal conjugate (against every virus protein, not permitting differentiation between pestiviruses), or else a monoclonal one (in front of protein gp55, which makes for differentiation between the various pestiviruses), marked with either fluorescein or peroxidase.

The advantage of the above technique is its high speed (two to three hours) and its inconvenience is that not a great number of samples can be used. The application of this technique is recommended for quick diagnosis in areas already infected or highly suspect of being infected or when the number of samples is not very high.

## Capture ELISA

With an acceptable level of correlation with viral isolation, the system has been used especially as from 7 to 10 days after infection to detect viral antigens from organs or blood leukocytes taken from suspect animals.

This technique, which uses monoclonal antibodies can be used for a large number of samples, because the different stages of the technique, including its reading, are automated.

The total time for the implementation of the above method is 36 hours, much longer than immunofluorescence, but much shorter than viral isolation.

This technique is recommended for areas already affected or areas with high probability of being infected and also when the number of samples is very high.

## Viral nucleic Acid Detection

The CSF technique for the detection of viral nucleic acids is highly practical, quick and efficient in the diagnosis of a large number of infectious diseases.

It consists in the detection of a small specific RNA fragment of the virus through the amplification of the polymerase chain reaction.

An RNA fragment has been selected that is common to every pestivirus, plus another fragment which is specific to each component of this viral group so that a highly sensitive and specific differential diagnosis can be done. Further, it is a relatively quick and economical technique; doubtless the technique of choice for any situation.

## Antibody Detection

It is most useful to check for the presence or absence of free areas and areas with no vaccination, but "not when a recent infection is suspected" since anti-CSF antibodies will only appear between 2-3 weeks after infection. In that latter case, the detection of antigens and/or antibodies should be conducted.

The great disadvantage of the two methods described below is the time required for the appearance of antibodies, and they will not permit differentiating the disease antibodies from the vaccine originated antibodies.

## Seroneutralization

It consists in determining the ability of the serum subject of the study to neutralize the effect of the virus on the PK 15 cell line.

Since the CSF virus will produce no cytopathic effect, the possible action of the virus on the cell is visualized through either direct fluorescence or immunoperoxidase. It is a highly specific and sensitive method, but it has the inconvenience of its high laboriousness, reason why it is not recommended for a large number of samples, although it is recommended as a reference technique.

It is a most useful technique in the control of anti CSF vaccines, as it permits determining the susceptibility level in pigs, as required by the vaccine control.

#### Differential ELISA

It is based on the Competition ELISA, which uses a monoclonal antibody in front of gp 55, which further permits differentiating CSF antibodies from those of Bovine Viral Diarrhea (BVD).

It permits analyzing a large number of samples in a short period of time, thanks to the fact that ELISA system phases can be automated.

Samples to be sent to the laboratory:

They should come along with the corresponding sample protocol.

- for the detection of the virus

Samples should reach their destination as rapidly and safely as possible, and, in no circumstance, should they be kept at ambient temperature for a long time.

If the laboratory analysis is to be conducted under 72 hours, it is recommended to keep the samples at 4°C – 39°F; after 72 hours, it is better to freeze them to –40°C / -104°F and transport them in containers which will keep the above temperatures.

The safety concept is most important in those countries or areas free from CSF, reason why vis a vis a suspicion, every measure should be adopted to assure not only a fast and timely dispatch to the diagnosis laboratory, but that will assure at the same time that the sample will not be misplaced or lost for whatever reason, since the biological material is a high risk one, because of its potential capacity to be the origin of new foci of the disease.

The samples to be sent are: tonsils, lymph nodes (pharyngeal, mesenteric), spleen, kidney, distal ileum and blood with EDTA in live animals.

- For antibody detection:

Samples of sera taken from recovered suspect animals, from females with litters presumably congenitally infected, or from pigs under a vigilance scheme.

## 2 OCURRENCE

At present, the CSF is widely distributed in many places in the world.

It has been possible to eradicate it successfully from North America, Australia, New Zealand, Japan, and some countries in Northern Europe and South America.

Chile, since 1997 has been a country free of CSF. See Annex N° 1: Chile, a country free of CSF.

Most countries with an important swine production have established measures to control the disease, although their efficacy will vary according to the country's economic situation, and the level of development of veterinary systems and laboratory infrastructure.

## 3 INFECTIOUS AGENT

\* General characteristics of the causing infectious agent:

CSF is produced by an RNA virus, belonging to the pestivirus genus, and to the Flaviviridae family. Taking into account the genetic similarities, CSF viruses can be subdivided, quite precisely, into numerous types and subtypes; at present, the world distribution of the nine principal subtypes of the CSF virus is well known.

It has been found that the different virus lines can be present in different parts of the world at different moments, and that if a representative typing of the viruses isolated in the different CSF foci in the world were available, it would be possible to identify the possible origins of the foci occurring in areas without infection.

\* Antigenic and genetic relationships with other infectious agents:

CSF virus is closely related, to other two virus in the same Pestivirus genus: the Bovine Viral Diarrhea virus (BVD) and that of Border's Disease; these viruses are primarily pathogenic for ruminants, although the BVD can also infect swine, causing at times infections with a clinical description and lesions similar to those of the CSF.

\* Physical- chemical properties of the virus

Due to the presence of lipoproteins in its shell, the virus becomes rapidly inactivated with organic dissolvents, such as chloroform and ether; it is also sensitive to the action of ultraviolet radiation.

Its infectivity is easily destroyed by subjecting the virus to temperatures of 60°C / 140°F for a minimum 10 minutes; the same result can be achieved at lower temperatures if the time of exposure is increased; that is why similar effects can be observed at a temperature of 56°C / 133°F for 60 minutes.

The CSF virus is inactivated at pH <3, or pH >11; at temperatures -20°C and -70°C, and lyophilized it can keep for years.

It can survive some meat processing methods such as curing and smoking.

The CSF virus will remain infectious in raw pork for long periods of time, ranging from 27 days in bacon to 1500 days in frozen pork.

Permanence of the virus in cured products was studied by inoculating pigs with CSF virus and, at the moment of maximum viremia, all animals were bled and slaughtered; tissues to be studied were selected, and with them the various products were subsequently studied (products such as iberic ham and serrano (salted cured) ham, iberic shoulder and iberic sirloin). Samples were taken at slaughter and at intervals during the curing process and analyses were made to check for the survival of the virus in samples taken from fat, nodes, bone marrow and muscles from the tissues, by using "in vitro" techniques; and when the latter were negative by inoculating the samples "in vivo".

In cured products, the time for the virus inactivation range from 250 days for iberic hams, and 140 and 126 for serrano (salted cured) ham and iberic sirloin respectively.

The virus becomes inactivated due to the action of cresol (16%), sodium hydroxide (2%), formaline (1%), sodium carbonate (4% anhydrous or 10% crystalline, plus 0,1% detergent), ionic and non-ionic detergents, strong iodinephores (1%) in phosphoric acid, in hypochlorite at 2%, phenol at 15%, and limestone whitewash at 5%.

#### \* Resistance to environmental conditions

Survival of the CSF virus in nature will depend both on the environment and on the environment in which it is protected (blood, saliva, and feces).

Although it is a virus quite resistant to drying and the external environment, especially when it is in exudates, blood or any protein medium, it does not have the same resistance as other Swine viruses, such as for example that of the virus of African Swine Fever.

Putrefaction will destroy it in 1 to 3 days.

That is the reason why it becomes easily inactivated in manure (24-48 hours), if it is not in either blood or nasal exudate.

In uninhabited facilities it usually disappears between 1 and 15 days, it can also remain for various days in feces, urine and secretions.

In purines it is recommended to keep them for 45 days to achieve inactivation.

#### **4. NATURAL RESERVOIRS:**

Represented by domestic and wild swine, although the virus has the ability to replicate in other animal species, such as domestic ruminants, antlers, and laboratory animals, causing a virtually asymptomatic fever reaction. Among them that occurring in rabbits is the most important one, since it caused the obtention of the classical attenuated vaccine strains used in the control and eradication of CSF in various parts of the world.

#### **5 MANNER OF TRANSMISSION:**

The CSF virus can penetrate the body by ingestion, inhalation, skin or semen.

Once inside the animal, the virus will replicate in the tonsils (oral or nasal infection) or in the regional lymph nodes.

After a first replication phase, the virus moves into the blood, producing viremia between 12 to 20 hours post infection, up to as long as several weeks.

After this phase, the virus settles in the target organs (spleen, lymph nodes, kidney, lung, bone marrow), where new virus replications take place and the characteristic hemorrhagic type lesions appeared.

Direct contact between infected animals (in the acute phase or carriers) and healthy animals is the most common manner of transmission of the CSF virus.

Virus shedding in infected animals can begin as from the second day after infection, through saliva, ocular and nasal secretions or air. After a few days, the virus can also be shed through urine, feces and semen.

It is important to underline the transmission by asymptomatic carrier mothers to their piglets, or to other susceptible adult animal.

Apart from the contact of either diseased or carrier animals with healthy animals, or the intake of contaminated products, which are the most important contagion mechanisms, there are other manners, outstanding among which:

- Contaminated means of transportation (recent outbreaks of CSF in Europe have made it clear that the transportation plays a most important role in the transmission of the disease; thus, it has been possible to prove that 25% to 50% of outbreaks were caused by contaminated transportation).
- Contaminated clothing and footwear:
- Contaminated purines.
- Surgical and/or medical exploration equipment.
- Insects and rodents



**6. INCUBATION PERIOD: 2 - 14 DAYS**

**7 TRANSMISIBILITY PERIOD:** congenitally infected piglets present a persistent viremia and can shed the virus for months

**8 SUSCEPTIBILITY AND RESISTANCE:** both domestic and wild pigs are susceptible to CSF; a relatively higher resistance to the disease can be observed in adult pigs.

**9 METHODS FOR CSF CONTROL:**

- Preventive measures: the best solution for a country to be free of CSF is to prevent the entrance of the virus. The factors to be taken into account, for countries or areas free of the virus would be:
- Countries free of CSF.  
Control to prevent the entrance of CSF should be basically focused on the following points:
  1. Not buying live pigs, or fresh pork, or products elaborated from non treated pork, from any affected country.
  2. Not importing from any affecting country either porcine semen or embryos.
- Areas free of CSF:  
These should strengthen their biosecurity measures to prevent infection, which implies controlling thoroughly the movement of animals and the means of transportation used, in order to prevent the possibility of their coming from the affected areas, as well as giving full information to raisers and veterinarians in the area, for them to avoid the use of the same circuits of suppliers of feed, technicians, etc; and above all, suspicion should arise promptly concerning any one animal which fails to eat, in order to discard the possibility of CSF.

**Vaccination**

Many immunization methods have been used. At present, the most widely vaccines used in different programs to eradicate the disease are attenuated live vaccines: "Chinese Strain" and "Thiverval Strain".

The Chinese Strain is lapinizada, also known as "Suvac", "C" and "K" strain. The strain used at present presents no residual virulence, it is totally apathogenic, even in gestating sows and suckling pigs. It has rapid action, reason why apart from inducing immunity, it presents viral interference to the pathogenic virus.

Thiverval strain, from France, is the product of a viral cloning on the PK 15 cell line. That is to say, it has been adapted and produced in cell cultivation. Its innocuousness has been proven even in immune suppressed animals, and does not present either residual virulence or reversion to virulence.

With both strains, immunity is given against the CPF virus quickly, and animals can survive an experimental infection, even at five days after inoculation.

Antibodies induced by the above vaccines cannot be differentiated from the virulent virus antibodies, and it is impossible therefore to differentiate possible diseased animals from healthy vaccinated carriers.

A vaccine made of sub-units is in its experimental phase; it is made up exclusively by gp 55 (E2) protein, which has induced antibodies in pigs experimentally, with the great advantage that these antibodies can be differentiated from those induced by the pathogenic virus.

- Epidemiological measures

The control of the disease can be carried out in various manners, depending of the size of the area affected, swine density, cultural and social level in the area, biosecurity measures in the farms, economic and human means available, foreign market of the sector, etc, etc.

At any rate, the international focusing policy as per OIE directives is followed. These control measures can, in their turn, be increased with the use or non-use of vaccines.

Vaccination in a sanitary ring, for the control and subsequent eradication of the disease, played an important role in Europe in the 70's and 80's, with massive vaccination campaigns with the attenuate strains with the purpose of eliminating the virus and carrier animals progressively.

At present, those countries using commercial vaccines loose the condition of country free of CPF, as it is not possible to differentiate animals from diseased and/or carrier ones, and exports are prohibited for long periods of time.

- Communication to OIE. As this is a disease in OIE's list A, it should be communicated immediately to this organization, so that countries will adopt the protection measures required.

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## 10 Links

- OIE, Office International des Epizooties, (<http://www.oie.int/esp/es-index.htm>).
- OIRSA,Organismo Internacional Regional, (<http://ns1.oirsa.org.sv/Castellano/D105>).
- Centro Panamericano de Fiebre Aftosa (<http://www.panaftosa.org.br/novo/in>)
- IICA ,Red Andina de Información (<http://www.icasaninet.net/>)
- INNPaz-Productos Biológicos(<http://www.innpaz.org.ar/MENUPAL/inppaz-oie/plaprbio.html>)
- ProNaCLucha 9 Porcinos (<http://senasa.mecon.gov.ar/animal/p>)
- Internet para Veterinarios (<http://redvya.com>)
- Pro Med Mail (<http://www.promedmail.org/pls/prom>)
- Classical Swine Fever(<http://www.angelfire.com/anime2/>)
- Pighealth.com(<http://www.pighealth.com/diseases/csf diagnosis.htm>)
- RAIZO-Epidémiosurveillance Animale (La Peste Porcine Classique) (<http://www.agr.gouv.ca/qasa/des/Bul-no26.pdf>)
- Swine Fever(<http://vetgate.ac.uk/browse/>)
- The pig site (<http://www.thepigsite.com>)

## 12 Search Engines

- www.Google.com (search Peste Porcina Clásica o Swine Fever or Peste Porcine Classique)

## II EMERGENCY SYSTEM

### 1. Introduction

The rule in Article 2.1.13.2 of the OIE's Zoosanitary Code states: "a country can be considered free of CPF when there is proof that the disease has not been present in that country for at least two years.

This period is reduced to one year from the presence of the latest case for those countries conducting sanitary slaughter associated to vaccination against Classical Swine Fever, and to six months for those practicing only sanitary slaughter".

By virtue of the fact that Chile was complying with the requirements established by OIE, on April 6, 1998, resolution N° 987 of the Agricultural Ministry was signed, declaring Chile a country free of Classical Porcine Fever, and said Resolution was published in the Republic of Chile's Official Gazette N° 36039, of April 14, 1998.

As a result of this declaration, the Classical Swine Fever was incorporated into the system of exotic diseases prevention.

Within the prevention measures stand out those related to the procedures for importation of pigs and their products from other countries, and under conditions which will assure non entrance of the viral infectious agent to Chile, and also the sanitary control conducted by the Chilean Livestock and Agricultural Service (SAG) at every potential point of entrance of risk animals or products, such as seaports, international airports, international border stations.

Sanitary control of exports using food remains or waste to feed pigs is also the subject of a preventive action in the country.

For all the above, and considering that there are no absolutely effective preventive measures, SAG, through its Livestock Protection Department must establish national vigilance actions aimed at an early detection of the disease and the application of adequate measures vis a vis a possible presence or suspicion of the disease.

The possible presence or suspicion of CPF in Chile will determine the operation of a sanitary emergency system, aimed at the control of this exotic disease and its eradication in the shortest possible term, so that the losses generated thereby will be as little as possible, especially the temporary loss of export markets.

Timely communication to ASPROCER and AMEVEC and to each of the pig owners at the industrial level, as well as information to the components of the livestock industry, such as fairs, slaughterhouses and pig raisers, so as to reinforce biosecurity throughout their herds and throughout the industry is to be one of the first actions to be implemented.

Utmost importance will also be given to communication, in the shortest possible time, to OIE and the countries which international trade of pigs and pork products is conducted.

The appearance of CPF in Chile will determine the slaughter and destruction of affected and contacted pigs as soon as possible, so that this area considered as infected may recover the condition of free of CPF after 40 days, at least, from the confirmation of the last case and the end of the operations of sanitary slaughter and disinfection.

## 2 Background

The Livestock Sanitary Emergency System is organized in phases of action according to the existent sanitary risk level, and at hierarchic levels of the structure, according to the kind of functions and characteristics of the actions that may be necessary in each stage.

The Phases of action are as follows:

Phase I of Sanitary Normalcy: period in which there are no health situations meaning declarations of sanitary alert or emergency, and which, therefore, correspond to a minimum risk phase.

Phase II of Sanitary Alert: period generated by the detection of internal or external health risk situations making the outbreak of an exotic disease such as Classical Swine Fever likely.

Phase III of Sanitary Emergency: period generated by the detection of Classical Swine Fever in Chile.

The Hierarchical Levels of the Structure are:

Politico-Strategic Level

Tactical Level

Operating Level

The functions of each of these structure levels are defined in the Master Plan for the Emergency System, in Chapters II, III, IV and V.

### 3 Sanitary Emergency Phase

Once a focus of Classical Swine Fever has been detected, automatically phase III of Sanitary Emergency is put in place, the purpose of which is to apply in the infected area, within the context of a Campaign, a set of sanitary actions aimed at controlling and eradicating the exotic disease focus in the shortest possible time, and at the lowest cost for the country. In this sense one of the first actions

#### 3.1 Structures of the Phase of Sanitary Emergency

##### 3.1.1 Politico-strategic level

- National Committee for the Emergency Campaign
- National Operating Center for the Campaign
- Support Groups
  - a) Emergency Campaign National Coordination
  - b) Technical Support Group
  - c) Technical Support Head
  - d) Logistic Support Group

##### 3.1.2 Tactical-Operating Level

Its function is establishing the "Sanitary Emergency Area", which is defined as "a territorial unit in which an emergency event occurs, and in which an emergency operation is established, within the framework of an Eradication Sanitary Campaign".

The Emergency Area has an epidemiological, juridical, and administrative expression, which are defined in the Master Plan, Chapter V.G

The structure of the tactical-operating level is as follows:

- Emergency Area Operation's Center.
- Emergency Area Operation Head.
- Field Units.
- Technical Support Units.
- Logistic Support Units.

#### 3.2 Definitions of geographic areas.

In the Sanitary Emergency Area, three geographic areas are defined and determined, which, as far as possible should be duly signaled with signs indicating the corresponding restrictions.

### 3.2.1 Affected Area

The main actions in this area are related to the suspension, in the shortest possible time, of the transportation of animals and animal products. This area includes an Infected Area and a Perifocal Area.

#### Infected Area:

It is delimited by two parts, the Focus and the Focal Area.

In the Focus are found the farm or farms with diseased animals; and in the Focal Area the neighboring farms and the other farms that may be related to the farm directly or indirectly affected.

#### Perifocal Area:

It is located between the infected area and the Threatened Area.

It can have a radius from 5 to 10 km., which will depend on several factors such as natural limits, topography, access roads, animal movement, etc.

### 3.2.2 Threatened Area

It covers an area acting as a buffer area between the affected area and free area.

It can vary in area from several regions down to a small strip around the affected area.

Animal movement is also suspended until knowing the magnitude of the zoosanitary event; subsequently, movement is restricted to slaughterhouses and later on to fairs and other farms.

### 3.2.3 Free Area

This is the one with no epidemiological relation to the affected area.

## 3.3 Measures to be adopted in the different areas. See procedures in the CSF Manual

### 3.3.1 In Affected Area.

#### a) General Restrictions

- i) Susceptible Animals: transportation in or out is to be prohibits, especially from the infected area, as well as internal movement between farms.

It will only be permitted to transport pigs out of the farms in the perifocal area to slaughterhouses authorized by SAG, which will comply with all maximum bio-security requirements, with proven absence of direct or indirect relation with the farms in the focal area.



ii) Animal products and by-products: the moving out of swine meats, viscera and by-products from non-authorized slaughterhouses is to be prohibited.

iii) Concentrates: the going out of the concentrated feeds for pig consumption, coming from the infected area is to be prohibited.

iv) Veterinarians and other people: the movement of people into the focal area will be restricted by the sanitary authority.

v) Vehicles: the movement of vehicle into the infected area will be restricted by the sanitary authority.

b) Closing of the farm or farms affected.

The focus must be under interdiction, which will be communicated in writing to the owner and the insurance company.

This communication will indicate the prohibition to move out animals, animal products and by-products, pharmaceutical products, concentrates and feed and ingredients for animal use, the same as the restrictions related to the movement of people and vehicles.

c) Quarantine.

All and every farm within the infected area are to be put under quarantine.

Such action should be communicated in writing to the owner, as well as the indication of restrictions concerning the movement of animals, products, feed, people and vehicles.

Further, the responsibility to report immediately the suspicion of disease to the health authority will be indicated.

d) Fencing of the Affected Area.

The perimeter of the area is to be operatively fenced, using as far as possible the geographic features present, rivers, roads, railway lines or others as natural limits which will permit isolating it from the threatened area.

On a complementary basis, sanitary containment barriers will be set up, which will operate 24 hours a day with the support of the police.



e) Operation at barriers

Sanitary barriers are to be set up in strategic places, both in the perimeter of the area to control movement in and out, and internally to control movements that may take place within the area.

The perimeter barriers in the affected area should have the functions of disinfection and containment. Inner barriers may be either for containment or disinfection according to their location. Normally, in the roads leading into the affected farm or focus, disinfection barriers are to be placed, apart from the disinfection measures that are to be established within the focus.

f) Update survey of the susceptible population.

g) Periodical clinical inspection to susceptible animals.

All susceptible animals in the affected area are to be subjected to clinical inspection on a periodical basis, so as to detect the appearance of SCF clinical signs as soon as possible.

h) Bio security Measures

To prevent the infectious agent from being transported through the movement of people and vehicles, all necessary disinfection and hygiene measures are to be adopted.

i) Closing livestock concentration places (Fairs and others).

j) Deciding destination of those animal products which are possible virus carriers (meat and by-products).

k) Sending to the slaughterhouse after clinical inspection, the healthy susceptible animals, in order to lower livestock density in the area.

l) Conducting Sanitary Education and Divulcation Tasks (road signs, etc.)

m) Limiting the movement of non susceptible animals and agricultural products.

### 3.3.2 In Threatened Area

#### a) General Restrictions:

##### i) Susceptible animals:

Susceptible live animals should be prohibited from leaving the area  
There may be internal movement between farms, on authorized vehicles.

##### ii) Products and By-products: No restriction

##### iii) Concentrated feeds: Hay must be prohibited from leaving the area

#### b) Fencing the Area

Like the infected area, its perimeter should be fenced by using geographical features, roads and others, setting up strategic barriers at the perimeter negotiable points.

The latter should operate 24 hours a day, with the assistance of the police.

#### c) Operation of Barriers.

Barriers are to be set up at perimeter negotiable places; these barriers are for containment (Directive on Barriers and Displacement Control)

#### d) Reception of Reports.

#### e) Vigilance

As it is an area in which there is some risk of infection, a system of vigilance for slaughterhouses should be put in place, including sampling at such places, along with a design for sampling high risk farms.

#### f) Livestock Concentration Places:

Active vigilance should be in place at livestock concentration places.

Prohibition of events such as rodeos and exhibition.

### 3.3.3 In Free Area

- a) Vigilance at:
  - i) Livestock concentration places (fairs)
  - ii) Slaughterhouses
  - iii) Farms
- b) Processing 100% of the reports received.
- c) Keeping updated information concerning the evolution of the foci (cartography).
- d) Informing the community about the situation on a constant basis.

### 3.4 Sectorizing of Areas.

The campaign head, with the support of the sector veterinarians will define the number of control sub sectors in each area.

The number of sub sectors should be equal to the number of sanitary inspection brigades available to attend the event of sanitary alarm.

The geographic area in each sector will be variable and will depend on the following factors:

- Important topographic features: Ideally, each control sub sector will be attended by an inspection brigade made up by 1 Veterinarian and one Agricultural Technician; it could be delimited by important geographic features or physical limits (fences) which could keep an animal population as stable as possible. It should always be kept in mind that there are neither geographic nor physical limits 100% non-negotiable.
- Topography: it is an important factor to take into consideration, since it will dictate speed of delivery and density of the population exposed.
- Category of the area to be sectorized; if it is an affected area, the frequency of inspection should be higher than that for a threatened area; therefore, the area of a sub sector located in the affected area should be smaller.
- Human and material resources available.
- Kind of vehicles to be used.

### III WORKING UNITS

Each operating unit or brigade has a function to carry out; below, the definition for each activity to be performed by each one of them.

#### 1. Report, Tracing and Inspection Processing Units

##### 1.1 Background

One of the keys to keep one step ahead of the disease is to track the movement of animals, products, materials and people at the beginning of a focus. Subsequent actions related to the processing of the reports, tracing performed during the focus and a sustained vigilance through periodical sanitary inspection of the farms located in the area under control will be essential to achieve final eradication.

##### 1.2 Objectives

The objective of the tracing, report and inspection unit is to provide, permanently, rapidly and efficiently, all field information as well as a knowledge of the dynamics of the disease in the affected geographic area. The above so as to undertake the prevention and control measures that may be necessary on a timely basis.

##### 1.3 Report Processing Unit

This unit will be made up by one or more brigades, each of them under an Official Veterinarian (MVO)

The brigades are responsible for processing in the field the reports received at the Operating Office.

##### 1.3.1 Report Processing Unit Functions:

- a) Processing reports within 24 hours of reception.
- b) Gathering the maximum amount of epidemiological data in the report received.
- c) Clinical inspection and taking of samples to 100% of susceptible animals.
- d) Issuing quarantine and closing documents when the situation so warrants.
- e) Conducting an epidemiological assessment (establishing possible origin, probable spread and characterizing lesion age).
- f) Reporting immediately to supervisor in positive or suspect case.
- g) Reporting activities performed to the Information System.

The specific objective is to process every report originated in the perifocal area and in the threatened area when the diagnose is positive. Before leaving the farm, this brigade is to obtain as much information as possible concerning the possible origin of the disease, and will take every indicated measure so as to prevent its spreading.

The brigade cannot continue processing the report; in this case, the contaminated brigade must be replaced immediately.

For the above reason, the diagnosis obtained will be communicated immediately to the unit head, so that the pending activity will be given to a different brigade.

Once the community has become aware of a sanitary alarm event, disease reports will tend to increase progressively.

Although many of the reports will end up in a negative diagnosis, they become a most helpful element to get initial knowledge of the epidemiological situation on which action should be undertaken.

The brigade should process timely all reports of CSF suspicion, and will perform the first actions should the case the initial diagnosis so warrant.

#### 1.4 Tracing Unit

This unit will be made up of one or more brigades, each of them with one Agricultural Technician and an Official Veterinarian in charge.

The functions to be performed by each one of these brigades are:

- a) Conducting tracing visits to the farms, requesting epidemiological information, inspection of the animals, and taking relevant samples when the epidemiological analysis so dictates.
- b) Tracing the movement of animals and products from the affected areas, from livestock concentration places in the risk areas, before the above defined movement restrictions.
- c) Tracing the movement of people and vehicles which may have been in contact with exposed or affected animals, products and by products, before the above defined restrictions.
- d) Issuing quarantine and/or closing documents, as the case may be.
- e) Reporting on a daily basis their activities to the Information System, through the epizootiological investigation Form.
- f) Notifying detection of the disease to the supervisor.
- g) Gathering as much epidemiological data as possible generated by tracing.

In the presence of positive cases, the farm must be placed on the quarantine and a report is to be sent as soon as possible to the Campaign Head.

#### 1.4.1 Tracing of animals and products.

The specific objective of this action is to find out the data concerning the origin of the focus, acquiring for that end any epidemiological information as will facilitate tracing the disease within or outside the area under control. When this tracing means having to investigate the free area, responsibility for this activity will be assigned, by the Campaign Head, through an official message, to the corresponding SAG's jurisdictional unit.

Tracing implies investigating the movements of animals, people and transportation of products from and to the affected farm, from fairs and slaughterhouses as well as those made by buyers and animal stockers.

The movements are divided into:

##### 1. Outside the Region.

An emergency may affect one or more regions. In many cases, tracings lead to the investigation of some farms located outside the region affected. If the location of the above is not affected or under emergency, tracing is conducted according to the SAG's normal organization schedule.

##### 2. Within the Region.

On the contrary, if the tracing is to be carried out in the region where the emergency is present, the activities to be developed are divided, according to the location of the tracing, into:

- a) Outside the area under control
- b) Within the area under control

In each one of these areas, tracings are to be carried out by brigades acting only in those areas.

While the emergency develops, these brigades are to take immediate measures concerning feed based on wastes, which is to be stopped, thereby rapidly decreasing the initial risk. This kind of control should be given high priority, first towards the places with a high animal density. If it were not possible to prevent this kind of feed, the parties concerned should be alerted in the sense that only the use of cocked waste will be permitted.

#### 1.4.1.1 Tracing the movement of animals from the farms affected.

Once the diagnosis has been confirmed, the information obtained from the owner and his employees is to be expanded and confirmed.

The period to be considered in the investigations will be 30 days before the appearance of the first symptoms, or even longer, should there be doubts as to when the problem actually started.

Data such as date, animals transferred species and complete data of the consignee should be recorded, so as to find them, place them on the quarantine or retain them immediately.

In areas with low density rates, tracings can be carried out with the available personnel; if a large number of animals were involved, or in the case of areas with high animal density rates, support could be requested from the personnel of other institutions under the Ministry, Town's Halls, or even the police.

#### 1.4.1.2 tracing of products, vehicles and personnel movements.

Primarily, the movement of animals is to be investigated, without neglecting the transportation of meat, purines, equipment, vehicles, people, pet animals, etc.

Concerning the investigation of the movement or transportation of fresh, frozen and chilled animal products, it is highly difficult to conduct in practice; for this reason, it is recommended firstly to contact the person responsible for the information in the facility so as to determine actual movement, since in some instances this will not correspond to that reported in the documentation.

#### 1.4.1.3 Tracing field Veterinarian's movements

Of the people working in the affected area, besides owner and personnel present there on a permanent basis, it is necessary to be concerned about such people as conduct visits to those facilities, and especially those who enter into contact with susceptible animals; in this context, veterinarians gain great importance in the possible spreading of the disease and in general, those people that perform vaccination or other similar activities in various farms.

A veterinarian can unwittingly visit an affected farm before the presence of the disease is suspected, and he can then visit other establishments; therefore, it is important to contact them so as to explain the restriction to visits to the area, request a report of their visits, dates and times of arrival to the farms, as well as data on the animals treated and other activities performed, plus the disinfection methods used.

Further he should be advised that his equipment and clothes should be disinfected immediately. As to biological pharmaceutical products used by him, and which would be suspect of contamination, they are to be burned and buried, and they cannot leave the farm.

The farms defined are to be visited for a minimum 21 days (with a maximum interval between visits of 7 days).

The above investigation should also include vaccine applicators, etc.

1.4.1.4 Tracing of the movements of vehicles, animals and personnel movements from an affected or exposed livestock fair.

The Livestock fair is the most important animal concentration place for the spreading of diseases; they concentrate animals from different places, whose destination may be other farms or slaughterhouses, and they can bear the disease to far-off places.

For the above reason, these facilities are to be considered high priority ones for vigilance, and the periods prior to the detection of the disease are to be considered most especially.

It is recommended first to locate the administrator, especially the person responsible for the animal records, and the veterinarian responsible for the health of the animals coming in and going out of the facility.

It is important to define adequately the period of time to be checked prior to the detection of the first diseased animal.

Local movements are to be investigated rapidly; on the other hand, if transportation has taken place to areas not under quarantine, the investigation is to be finished as soon as possible.

Movements to other regions are also to be reported; the latter will be responsible for conducting the corresponding tracing.

Lesser importance corresponds to those people who were in contact with the infected or exposed animals, be they employees, owner or buyers; to the extent practicable, they are to be located so as to determine their movement as from the date of exposure to the animals involved. Their movements are to be evaluated so as to begin an investigation should that be required.



## 1.5 Inspection Units

This unit will be made up by one or more brigades; each one will be made up by a Veterinarian and an Agricultural Technician. Each brigade will be assigned a specific territory, and there will be as many as necessary to cover the area to be determined adequately.

The functions defined for this brigade are indicated below:

- a) Conducting inspection visits to the farms, inspection of the animals and taking relevant samples within the previously assigned territory.
- b) Issuing quarantine and closing documents, as the case may be.
- c) Issuing authorization for the movement of animals, products and by-products, as applicable.
- d) Preparing risk reports for the farms under jurisdiction as requested by its supervisor.
- e) Reporting on a daily basis its activities to the information system, through the inspection forms (Annex N°3).
- f) Notifying its supervisor the detection of the disease.

The area affected will be divided in several sub sectors; the number will depend on the geographic area, animal density rate, number of farms, etc.

The territorial area and the animal universe in the control sub sector allocated to its brigade should be in agreement with its daily working capacity, and the inspection frequency as may be defined for each case.

Each sub sector will be under veterinarian, and he will be the only person authorized to issue permits for the displacement of animals, products and materials from the sub sector in his responsibility.

Likewise, this professional is to gather data on a daily basis, at the local barrier, concerning incoming animals, products and materials that may have been transported into the sub sector in his responsibility, so as to adopt the vigilance and inspection measures as each case may require.

### 5.1.1. Inspection of farms in the affected and threatened areas.

Sanitary inspection in the affected area (focal and perifocal) and in the threatened area corresponds to a vigilance task to be performed by the inspection brigades meant for this purpose; it is to be conducted along with the tracing and slaughter activities undertaken due to each focus.

Inspection brigades operating in these areas have as their main objective keeping a periodical and active vigilance in the area; this is conducted after the first control and eradication actions, and it is an efficient way to investigate the possible reappearance of new cases of disease on a timely basis.

At each inspection, a survey of the total number of existing animals should be conducted; any difference with the previous survey must be fully documented.

The frequency of inspections will be determined by the pace of each farm according to its closeness and/or relation to the focus.

Those farms in the focal area will have one inspection at least every 3 days, and those in the perifocal area, at least every 7 days.

These inspections should be maintained for 30 days after the slaughter of the animals in the focus. During the inspections, the biosecurity measures implemented during the emergency are to be followed strictly.

In the event of suspecting the disease, samples are to be taken and dispatched under 24 hours to the laboratory.

#### 1.5.1.1 Management of Farms with Contacts:

- i) Farms with direct contact: those farms adjacent to the focus, and treatment thereof will be the same as that for the infected farm.

The movement of animals from infected farms to other farms in the 10 days before the outbreak of the disease constitutes direct contact. Farms receiving animals between 11 days and 3 weeks before the outbreak of the disease will be placed under quarantine and will be inspected daily for 21 days.

The management of susceptible animals in other farm by employees from infected farms will constitute a direct contact. Such farm is to be managed the same as infected farms.

- ii) Indirect Contacts: an indirect contact occurs when people from an infected farm visit another farm.

The movement of agricultural products, equipment, feed, vehicles, also constitutes indirect contact.

Those farms considered as indirect contacts are to be kept under quarantine and susceptible animals are to be inspected daily for at least 21 days.

The person responsible for the reception and dispatch of the samples is to keep the corresponding records in order to identify protocols and their findings, which are to be delivered to the Unit Head. He is to keep copies of each protocol sent and of the findings.

## 2. SLAUGHTER, ELIMINATION AND ASSESSMENT UNIT

Once the slaughter order has been received, order issued by the person technically responsible for the field operation, the slaughter team which will be made up by an Official Veterinarian, one or two agricultural technicians, along with representatives of ASPROCER and the Insurance Company are to:

- a) Gather data from the farm where the slaughter will take place, farm identification number, diagnosis, number of animals, and request the necessary equipment.
- b) Coordinate with the Public Forces allocated (police or army) or with an external elimination team, as the case may be, with the disinfection equipment and the heavy machinery equipment, so as to define the place and time for the procedure.
- c) Go to the farm and evaluate the situation, location of the grave, its size according to the number of animals, planning the slaughter procedure.
- d) Assess the value of the animals by the Insurance Company under the supervision of the Official Veterinary (MVO).
- e) Conduct post-mortem to the animals.
- f) Supervise the earth removal equipment.
- g) Lead the slaughter procedure.
- h) Lead the burial procedure.
- i) Issue assessment and slaughter document.

### 2.1 Background.

The rapid and adequate elimination and slaughter procedure will guarantee a most efficient control of the disease, thereby preventing the spreading of the agent.

In the first place it is necessary to state that the slaughter is to consider 100% of the animals exposed. The above will be achieved by a methodical plan of the field action, leaving no details on unplanned, such as the action of the assessment team, the digging of the grave, the efficient round up of the herd, and an adequate manner to hold and dispose of the animals in the grave, so as to guarantee a euthanasia procedure which will be rapid, orderly, effective and as bloodless as possible.

From the moment a focus is detected in an area that has been pronounced threatened to the slaughter of the very last animal, not more than 24 hours are to elapse.

Assessment of the animals, products, etc., should be performed not over 12 hours after detection of the focus. Ideally, it should be a consensus decision, considering as a mandatory contribution the presence and the opinion of the owner, of representative of the local Livestock Owner Association and the officer of the SAG that may be appointed.

## 2.2 Objectives.

Proceeding rapidly and efficiently to the measure of slaughtering those animals, (and their contacts) in which the presence of the Classical Swine Fever has been confirmed, as well as the destruction of the products that have come in contact with them and adopting every measure tending to preventing the virus from spreading from the slaughter site.

The assessment and slaughter procedures are described in the Directive for slaughter and assessment.

## 3 CLEANING, DESINFECTION AND BIOSECURITY UNIT.

This unit will be made up for one or more brigades which, depending on the magnitude of the emergency (number of foci) will be made up by an Official Veterinarian and one or more Agricultural Technicians, under which there will be 2 or 3 workers.

Functions to be fulfill by these brigades are:

- a) Conducting the disinfection procedure at the moment of the slaughter (disinfection of machinery, slaughter site, slaughter implements, personnel, etc.)
- b) Conducting sanitation of the farm with slaughter: burring feces, fencing the slaughter grave, disinfection of pens and troughs, burning hay and other contaminated materials , disinfection of contaminated fields.
- c) Conducting the supervision of barrier disinfection procedure.

### 3.1 Background

The cleaning of the places, equipment and elements contaminated by discharge issued by infected animals is one of the most important procedures to prevent the disease from spreading. It is also important to use appropriate chemicals for disinfection, with sufficient equipment and personnel.

As the above procedures not ensure the elimination of the agent, it is necessary to allow a period of time after cleaning and disinfecting so as to permit the natural destruction of the agent.

### 3.2 Objectives

Eliminating the viral agents from those places as have been in contact with the secretions of diseased animals and eliminating any excretion coming from them.

Eliminating any viral agent that may have been transported in vehicles, equipment and clothing of the personnel working in the emergency.

### 3.3 Biosecurity Procedures.

In the affected areas and in the threatened area there may exist livestock concentration places authorized to operate; this mean a high risk due to the emergency situation. In this respect, it becomes necessary to coordinate with the Livestock Concentration Places Unit Head so that he will undertake the biosecurity measures that these places should take.

Concerning the personnel working in the various units, they should understand the importance of the biosecurity measures to be taken, and at the same time be recommended or required from users.

## 4 LIVESTOCK CONCENTRATION PLACES AND MOVEMENT CONTROL AND BARRIER UNIT.

This unit will be made up by livestock concentration places, control brigades and movement control and barriers brigades. Each brigade will be under an Official Veterinary, whose functions will be as follows:

### Movement Control and Barriers Brigades

- a) Setting up and implementing the sanitary barriers determined by procedures and rules for the control of animal and animal products movement as well as the bio security procedures for vehicles and people.
- b) Supervising the setting up of the barriers in working areas, and making sure of their proper operation.
- c) Educating and training the barrier personnel concerning the specific activities for the performance of their jobs.
- d) Establishing and supervising procedures to control the movement of animals, people, vehicles, products and by products.
- e) Cooperating with the Technical Support Unit by making all required reports available timely.

## Livestock Concentration Places Control Brigades

- a) Supervising the functioning and vigilance of the livestock concentration places according to instructions.
- b) Conducting inspection and control of fairs and slaughterhouses in the jurisdiction.
- c) Supervising, in fairs and livestock concentration places, the animals coming in and out, with their corresponding documentation.
- d) Issuing the quarantine, closing or operation restriction documents for livestock concentration places in coordination with the legal advisory unit-

### 4.1 Background

The movement of animals constitutes a high risk and in a sanitary emergency it acquires a fundamental importance in spreading the disease. This unit will be responsible for the control not only of the threatened part but for the rest of the region in which such event has occurred.

Barriers are control and disinfection points, and it is necessary to define them rapidly both as to location and as to the kind of task to perform, and they are responsible for limiting or preventing livestock movement.

On the other hand, quarantines are one of the most effective measures to prevent diseases from spreading due to the movement of asymptomatic carrier animals, main responsible for the outbreak of a new foci.

Livestock concentration places constitute high risk places, as they concentrate animals from different points of origin, and as some of these may be incubating the disease a strict control is to be implemented in these places.

### 4.2 Objectives

Eliminating and/or preventing the spreading of viral agent which have failed to be destroyed during the disinfection of foci; thus preventing possible dissemination through the movement of animals and animal products and sub products which may be incubating the disease or may be carriers of the virus.

At the level of livestock concentration places, in a first stage it is absolutely necessary to suspend auction sales and events concentrating animals from different points of origin, thus contributing to bring about a complete immobilization of animals in the area.

Later on, once the magnitude of the emergency has been evaluated, beginning to authorize on a restricted basis, some movements, keeping a registry of animals coming in and out. Furthermore, special attention should be paid to vehicles driving into such facilities and especially those transporting livestock, so as to implement thorough washing and disinfection.

After that, allowing partial operation of some slaughterhouses and fairs, authorizing only those which have a system to eliminate feces and liquids which will not favor the virus arrival to neighboring farms.

Procedures for barriers and movement of animals are detailed in the Directive for Barriers and Movement Control, as well as the procedures to be followed in the Livestock Concentration Places in case of emergency are described in the Directive for the Control of Livestock Concentration Places.

## 5. Sentry Unit

This unit will be made up by one or more sentry units, depending on the magnitude of the foci detected. Each brigade is made up by an Official Veterinary, and an agricultural technician.

The function of these brigades is to place sentries or to repopulate animals in farms and areas that were affected.

### 5.1 Background

Cleaning and disinfecting the facility does not guarantee the total destruction of the CSF, reason why it should remain unpopulated of susceptible animals for a period of time; later on animals are authorized in under highly controlled situation, as a way to guarantee that new outbreaks will not take place, or to control them if they should occur.

### 5.2 Objective

Verifying the absence of the infectious agent by introducing susceptible animals (sentries) to farms that were affected for the disease.

### 5.3 Procedure

As long as the region remains under emergency and there are foci, this procedure will not be started in any farm.

At the end of the quarantine, sentry animals are introduced and kept for 30 days, amount of time enough to detect any residual virus that might have escape the clean and disinfection procedures.

The number of sentry animals will depend on the size of the farm and the number of animals raised in it. A recommended amount is 5% of the habitual population, but never fewer than 5 animals. Each group of test animals should be made up by 50 kg pigs.

Test animals should come from areas free of the CSF and be identified with autocrotals; A necessary precaution is to conduct the corresponding serological tests before bringing them into the farm.

Upon arrival to the farm a clinical examination is made of every animal, stating in detail any clinical symptomatology or lesions observed. Finally, temperature is taken.

After this procedure, the animals can be brought into the other facilities, and they can have free access and come into contact with all pens in the farm. During all the test period the cleaning and disinfection measures are to be kept, for people coming in or going out of the farm.

Clinical inspection will begin 48 hours after arrival and for the first 10 days, it will be made every 48 hours. From then on, 2 checks per week will be made for the rest of the period; once this has finished, a blood sample is taken and sent to the laboratory for serological tests.

## 6 Disclosure

Once the disease has been diagnosed, the movement of animals in one or more regions is to be prohibited for a minimum 72 hours; this should be announced by the highest officials.

In this respect, the following steps are suggested:

Preparing an official report.

Communicating the suspension personally to Veterinarians, Artificial Insemination Companies, Livestock Owner's Sales Agents, Public Health Departments, etc.

Communicating officially, via FAX the suspension of all auction sales at livestock Fairs and Farms.

Visiting Processing Plants and talking with the Veterinarians responsible for the inspection of meats concerning the finding of lesions suspect of Swine Fever, and should be the case, they should suspend operations immediately.

Examining subsequently every animal in the pens, determining the origin of the suspect animals already slaughtered or not. Finally, determining the final disposition of the meat of the suspect animals slaughtered.